EXCURSION TO BEAUMARIS

(Regeneration of plants on fire area.)

On Saturday afternoon, November 25, some forty excursionists (including members of the Bird Observers' Club) visited the scene of last January's disastrous scrub-fire at Beaumaris—the worst ever experienced there. A sandy rise of uncleared tea-tree scrub, less than half a mile along Cromer Road from the beach, was selected for observation, and here the party split into several groups, each with a botanist to identify all seedling plants. Such seedlings, as had appeared since the burn, were listed by each group under two categories, viz., regrowth from seed of permanent local plants, and inquiline species (carried from neighbouring areas by wind or birds).

A half-hour's scouting was sufficient time for the several groups to note down almost every kind of seedling present within about an acre of scrubland; the lists were then correlated and gave the following total result of 53 different seedlings:—

INQUILINES
(mostly wind-blown annuals)

Grasses—
**Annual Veldt Grass*
**Hare's-tail Grass*
**Silvery Hair Grass*
*Yorkshire Fog Grass
**Quaking Grass* ("Shell Grass")
**Lesser Quaking Grass*
*Annual Poa
**Brome Fescue*
**Rat-tail Fescue*

Coarse Club-rush
**Mouse-ear Chickweed*
**French Catchfly*
*Fumitory
*Indian Hedge-mustard
Austral Stonecrop
Rufous Stonecrop
Stalked Stonecrop
*Scarlet Pimpernel
Black Nightshade
*African Box-thorn
*Buck's-horn Plantain
Tiny Blue-bell (not in Census)

Composites—
Common Cotula
*White Cudweed
Cotton Fireweed
**Groundsel*
**Cape-weed*
*Spear Thistle
*Sow Thistle
**Cat's-ear* ("flatweed")

PERMANENT LOCAL FLORA

Climbing Lignum
*Red-ink Plant
Angular Noon-flower ("pigface")

Legumes—
Spike Acacia
Late Black Wattle
Pale Wedge-pea
Showy Bossea
Creeping Bossea
*Tagasaste
*Gorse ("furze")
*Clustered Clover
Scarlet Coral-pea
*Dolichos

Creeping Wood-sorrel
Wedding-bush
*Carolina Mallow
Bundled Guinea-flower
Silky Guinea-flower
Manna Gum
Coast Tea-tree
Common Beard-heath
Kidney-weed
Kangaroo Apple
Stinkweed

In the foregoing table, the predominant seedlings are indicated by italic type and naturalized aliens by means of an asterisk. Seedlings *only* are

given, not shoot regrowth from perennial root-stocks, rhizomes, or tubers which outlived the fire. It is to be noted that, among the inquilines, annual grasses and composites occupy a prominent position (16 species, or more than half); members of these two large families are always among the first plants to populate a sterilized region—by virtue of their very small, light seeds, so readily carried away in air currents. Of the permanent local flora, the comparatively heavy seeds of legumes (in the germination of which fire is even beneficial) account for nearly half the species recorded, viz., 10 out of 24; these were doubtless already in the soil before destruction of the overhead cover.

SOME GENERAL NOTES ON POST-FIRE PIONEERS

Writing in the *Naturalist*, June, 1940, Mr. W. L. Williams reports on the regrowth at Dromana throughout 16 months following the holocaust of January, 1939. He, too, divided the young plants into two classes and found both introduced and native grasses to be early colonizers among wind-blown annuals; there were later abundant seedlings of Coast Tea-tree and Swamp Paper-bark, with some Drooping Sheoke, but no sprouts were discernible on any of the damaged, blackened spars—rather a helpful factor, as they afforded considerable protection to the seedlings during tender infancy. Mr. Noel Lothian (also in 1940) discussed the astonishing spread of Onion-grass and Cape-weed within six months of the bushfire which wrought such havoc in Torquay.

Recolonization by plants of areas from which the natural vegetation has been completely erased by intense heat (fires, volcanic action, etc.) has always been a subject of great interest to the ecological botanist. It is only at such a time that questions as to the vitality of seeds, speed of dispersal, survival power, aggressiveness or competitivenes of different species can be studied in detail.

A classical opportunity was provided on a grand scale between May and August, 1883: the worst series of volcanic eruptions within human knowledge then visited the densely-forested tropic island of Krakatoa (between Java and Sumatra) and completely obliterated every vestige of plant life. Less than a year afterwards the French scientist Cotteau landed on the island, but he failed to find a single living plant. Treub, however, who made a close survey two years later (1886), discovered not only lower cryptogams but 26 different vascular plants, including eleven ferns, four composites and one grass (all wind-borne), and several trees of the strand (from spongy, sea-borne fruits).

Victorians allowed a golden opportunity for carrying out similar detailed surveys to slip away after the unprecedented bushfires of January, 1939. But our British friends have been busy since 1940 listing plants that have come up on bombed-out areas in the heart of London. Commonest among the bomb-crater pioneers are Annual Poa, Willow-herb, Flea-bane, Groundsel and Colt's-foot—again a high percentage of wind-borne composites.

J. H. WILLIS.

ERRATA

In "Flower Perfumes and their Classification" (*Vict. Nat.*, Dec., 1944) the following typographical errors call for correction, viz.—

Page 134, fifth line from bottom, for *Sportium* read *Spartium*.
Page 136, first line, for *adoratissimus* read *odoratissimus*.
Page 136, note 8, second line, for *hirsina* read *hircina*.

J.H.W.